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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,443	11/20/2003	Jan Van Elp	081468-0306945	6646

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EXAMINER

NGUYEN, HUNG

ART UNIT PAPER NUMBER

2851

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,443

Applicant(s)

ELP ET AL.

Examiner

Hung Henry V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/18/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 20-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 6, 10-19, 28 is/are rejected.
- 7) ☒ Claim(s) 3, 5, 7-9, 29 and 30 is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/971,769.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-2, 4, 6, 10-19, 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Sweat et al (U.S.Pat. 6,469,827).

With respect to claims 1-2, 4, 6, 10-19, and 28, Sweat et al (figure 8) discloses a radiation source apparatus and a corresponding lithographic projection apparatus (see col.5, lines 4), comprising all basic features of the instant claims such as: a radiation source (110) unit supplying radiation of desired wavelength and radiation of undesired wavelength; and an optical device (118) having diffraction grating functions as a grating spectral filter for passing without changing of the radiation of desire wavelengths to form a projection beam of radiation and for

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deflecting the radiation of undesired wavelength (see col.8, lines 50-56); a projection system for projecting the patterned beam onto a target portion of the substrate (see col.9, lines 11-16); a patterning structure (70, 126) having a desired pattern formed thereon and a substrate (78).

Although Sweat et al does not specifically disclose the support structure and a substrate table, these elements are inherent elements of a lithographic projection apparatus and they must be present for the apparatus to function as intended.

With respect to claims 10-12, Sweat et al further teaches a cooling element having coolant channels, provided in thermal contact with the grating spectral filter (see col.8, lines 57-63, abstract and claim 38).

Regarding claims 13-14, Sweat et al teaches the grating spectral filter is a reflective filter and is a grating incidence reflector (see col.5, lines 14-15).

As to claims 16-17, Sweat et al teaches the radiation source unit is a laser produced or plasma radiation source (see col.9, line 37) and has desired wavelengths selected from deep UV, visible radiation or 13.4nm EUV (see col.5, lines 50-65).

As to claim 18, a portion of the radiation of undesired wavelengths is deflected by the grating filter onto a structure such as an aperture or a diaphragm (84, 94).

Allowable Subject Matter

3. Claims 3, 5, 7-9 and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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4. The following is a statement of reasons for the indication of allowable subject matter: claims 3, 5, 7-9 and 29-30 have been found to be allowable since Sweatt et al does not specifically disclose the grating spectral filter with particular functions/structure, as recited in the instant claims. With respect to these claims, applicant's arguments filed November 18, 2004 are persuasive and incorporated herein by reference.

Response to Amendment/Argument

5. Applicant's amendment filed November 18, 2004 has been entered. Claims 1, 6, 19 have been amended. New claims 28-30 have been added. Terminal Disclaimer has been approved and entered.

Turning now to the prior art rejection, regarding claims 1-2, 4, 6, 10-19, applicant's arguments with respect to prior art rejection have been carefully reviewed but they are not found to be persuasive. The applicant is reminded that the claimed subject matter to examination will be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not be read into the claims. In re Yamamoto, 740 F. 2d 1569, 1571, 222 USPO 934, 936 (Fed.Cir. 1984).

With this in mind, the discussion herein will focus on how the terms and relationships thereof in the claims are met by the references. Response to any limitation that is not in the claims or any argument that is irrelevant to or does not relate to any specific claimed language will not be warranted.

In response to applicant's arguments that while Sweatt discloses a grating spectral filter passes only the 13.4nm first order diffracted light and diffracts the light desired wavelength

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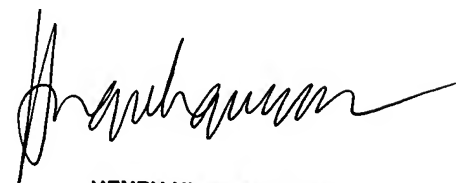
13.4nm but does not pass radiation of desired wavelengths and to diffract radiation of undesired wavelength, as recited in the instant claims 1 and 19. The Examiner respectfully disagrees with the applicant. Sweatt et al meets all of the limitations as claimed since in the broadest sense, "the 13.4nm first order diffracted light" can be regarded as "desired wavelengths to form a projection beam of radiation" and "the light wavelength 13.4 nm" can be regarded as "radiation of undesired wavelength" as broadly claimed in the independent claims of the instant invention.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/20/04



HENRY HUNG NGUYEN
PRIMARY EXAMINER